

REMOVAL ACTION WORK PLAN  
BUILDING 101 OPERABLE UNIT 3  
CONCRETE AND CONTAMINATED SOIL REMOVAL AND DISPOSAL

FOR

NAVAL AIR STATION JACKSONVILLE  
JACKSONVILLE, FLORIDA

NAS Jacksonville Administrative Record  
Document Index Number

Prepared for

**32212-003**  
**03.04.03.0007**

DEPARTMENT OF THE NAVY  
SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND

Under Contract No. N62467-93-D-0936

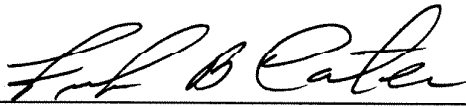

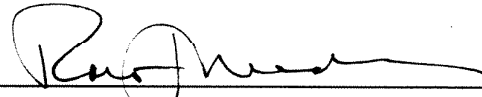
Prepared by

BECHTEL ENVIRONMENTAL, INC.  
OAK RIDGE, TENNESSEE

JUNE 1996

REVISION 1

Bechtel Job No. 22567

Approved:		<u>6/28/96</u>
	Project Engineer	Date
Approved:		<u>6/28/96</u>
	Project Manager	Date
Approved:		<u>8/1/96</u>
	Navy Contracting Officer	Date

## CONTENTS

<u>Section</u>	<u>Page</u>
ACRONYMS.....	iii
UNITS OF MEASURE.....	iv
EXECUTIVE SUMMARY .....	v
1.0 INTRODUCTION .....	1
1.1 SITE DESCRIPTION .....	2
1.2 REGULATORY SETTING.....	2
2.0 REMOVAL ACTION.....	3
2.1 CONCRETE AND SOIL REMOVAL .....	3
2.1.1. Concrete Removal.....	3
2.1.2 Contaminated Soil Excavation.....	3
2.1.3 Contaminated Materials Transportation .....	4
2.1.4 Contaminated Materials Stockpile.....	4
2.1.5 Foundation Compaction and Testing.....	5
2.1.6 Building Foundation and Slab Liner/Cover.....	5
2.1.7 Decontamination of Equipment .....	5
2.2 CONCRETE AND CONTAMINATED SOIL FINAL DISPOSAL.....	5
2.2.1 Concrete Disposal .....	6
2.2.2 Contaminated Soil Disposal.....	6
2.3 DECONTAMINATION WATER DISPOSAL AND HANDLING .....	6
2.4 REMOVAL ACTION MEMORANDUM .....	6
3.0 WASTE MANAGEMENT .....	6
4.0 QUALITY ASSURANCE PLAN.....	7
5.0 SAMPLING AND ANALYSIS PLAN .....	7
6.0 SAFETY AND HEALTH PLAN .....	7
7.0 PROJECT MANAGEMENT PLAN .....	7
7.1 PROJECT ORGANIZATION .....	7
7.2 SCHEDULE.....	7
REFERENCES .....	8

## ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
FDEP	Florida Department of Environmental Protection
FFA	Federal Facilities Agreement
FOTW	federally owned treatment works
IRP	Installation Restoration Program
NADEP	Naval Aviation Depot
NAS	Naval Air Station
NPL	National Priorities List
OU	Operable Unit
RAWP	Removal Action Work Plan
RCRA	Resource Conservation and Recovery Act
ROICC	Resident Office in Charge of Construction
SARA	Superfund Amendments and Reauthorization Act

## UNITS OF MEASURE

bls	below land surface
ft	feet
gal.	gallons
gpm	gallons per minute
in.	inch/inches
ppm	parts per million

## EXECUTIVE SUMMARY

The U.S. Department of the Navy through Southern Division Naval Facilities Engineering Command intends to implement removal actions at Building 101, the Old Plating Shop, located on the Naval Air Station Jacksonville, Jacksonville, Florida. This removal action is time-critical, and necessary for the protection of the construction workers involved in the construction of the new facility at the location of the Old Plating Shop.

Previous removal actions have occurred at a portion of this location as part of a previous time-critical removal action associated with the reduction of source control for potential groundwater contamination and the Resource Conservation and Recovery Act closure of the Old Plating Shop. A report titled *Certification and Closure Report and Comprehensive Environmental Response, Compensation and Liability Act Soil Contamination Reduction, Building 101, Naval Aviation Depot's Former Plating Shop*, dated November 1995 was submitted to the regulators and was accepted as documentation of this previous removal action.

The removal action addressed in this work plan is for the protection of the general construction worker from potential exposure to contaminants of concern that remain or may remain in the soil in the area of construction. The levels of contamination remaining, or projected to be remaining, in the area of construction were evaluated as being within acceptable EPA guidelines for risk to be protective of the groundwater in the *Preliminary Economic Evaluation Report (PEER) for Soil Contamination Reduction, Old Plating Shop, Building 101, Naval Air Station Jacksonville, Jacksonville, Florida* dated March 1995. However in the interest of worker protection during construction, the Navy desires to remove potentially contaminated soils from areas where construction workers might be exposed to the contaminants of concern.

Bechtel Environmental, Inc. under Prime Contract N62467-93-D-093 is the Navy's Response Action Contractor for District I and will implement the removal actions described in this work plan under Delivery Order 20. This removal action will be implemented in two parts. The first part consists of removal of concrete and soils in the areas of construction where potentially contaminated soils remain. The soils will be removed in the area of the new slab-on-grade, interior wall footings, and main building foundation footings. Existing foundations will also be removed as required. The areas where the soil is remaining will be compacted to the specification provided by the Navy and the area covered with 10-mil poly liner. The area will then be returned to the general contractor for completion of the construction project. The excavation limits are established by the drawing provided to Bechtel by the Navy entitled Repair Component Rework Area Package 3, by KBJ Architects, Drawings MCD1, MCD2, MCD3, MCD4, MCS1, MCS3, MCS4, MCS5, MCS9, and MCS10.

The excavated concrete and soils will be loaded into Bechtel supplied trucks for transport to Potential Source of Contamination (PSC) 42. The concrete and soils will then be placed on lined and bermed temporary holding areas and covered to prevent rainwater accumulation or potentially contaminated rainwater run-off. Upon notice to proceed with second part of the

project, the soils will be combined with the soils and sludge of PSC 42 stabilization project. The soils from the Old Plating Shop will then be stabilized as described in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-situ Sludge/Soil Stabilization for Naval Air Station Jacksonville, Jacksonville, Florida*, dated February 1996. The concrete will be used as fill material in the areas of the Serpentine Pond that have previously been stabilized. Closure of the pond will occur as described in the *Application for: Closure Permit, Old Plating Shop (Bldg. 101), Domestic Sludge Drying Beds, Industrial Sludge Drying Beds, and Polishing Pond, April 1996, Naval Air Station Jacksonville, Jacksonville, Florida*.

At the completion of the activities described in this work plan, a Removal Action Memorandum will be prepared and submitted to the regulatory agencies and copies placed in the Administrative Record describing the removal action. This will occur within 60 days from the start of the removal action.

## 1.0 INTRODUCTION

The U.S. Department of the Navy through Southern Division Naval Facilities Engineering Command intends to implement removal actions at Building 101, the Old Plating Shop, located on the Naval Air Station (NAS) Jacksonville, Jacksonville, Florida. This removal action is time-critical, and necessary for the protection of the construction workers involved in the construction of the new facility at the location of the Old Plating Shop.

Previous removal actions have occurred at a portion of this location as part of a previous time-critical removal action associated with the reduction of source control for potential groundwater contamination and the Resource Conservation and Recovery Act (RCRA) closure of the Old Plating Shop. A report titled *Certification and Closure Report and Comprehensive Environmental Response, Compensation and Liability Act Soil Contamination Reduction, Building 101, Naval Aviation Depot's Former Plating Shop*, dated November 1995 was submitted to the regulators and was accepted as documentation of this previous removal action.

The time-critical removal action addressed in this Removal Action Work Plan (RAWP) is for the protection of the general construction worker from potential exposure to contaminants of concern that remain or may remain in the soil in the area of construction. The levels of contamination remaining, or projected to be remaining, in the area of construction were evaluated as being within acceptable EPA guidelines for risk to be protective of the groundwater in the *Preliminary Economic Evaluation Report (PEER) for Soil Contamination Reduction, Old Plating Shop, Building 101, Naval Air Station Jacksonville, Jacksonville, Florida* dated March 1995. However in the interest of worker protection during construction the Navy desires to remove potentially contaminated soils from areas where general construction workers might be exposed to the contaminants of concern.

Bechtel Environmental, Inc. (Bechtel) under Prime Contract N62467-093-D-093 is the Navy's Response Action Contractor for District I and will implement the removal actions described in this RAWP under Delivery Order 20. This removal action will be discussed in two parts. The first part consists of removal of concrete and soils in the areas of construction where potentially contaminated soils remain. The soils will be removed in the area of the new slab-on-grade, interior wall footings, and main building foundation footings. Existing foundations will also be removed as required. The areas where the soil is remaining will be compacted to the specification provided by the Navy and the area covered with 10-mil poly liner. The area will then be returned to the general contractor for completion of the construction project. The excavation limits are established by the drawing provided to Bechtel by the Navy entitled Repair Component Rework Area Package 3, by KBJ Architects, Drawings MCD1, MCD2, MCD3, MCD4, MCS1, MCS3, MCS4, MCS5, MCS9, and MCS10.

The excavated concrete and soils will be loaded into Bechtel supplied trucks for transport to the area of Potential Source of Contamination (PSC) 42. The concrete and soils will then be placed on lined and bermed temporary holding areas and covered to prevent rainwater accumulation or potentially contaminated rainwater run-off. Upon notice to proceed with second part of the

project, the soils will be combined with the soils and sludge of PSC 42 stabilization project. The soils from the Old Plating Shop will then be stabilized as described in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-situ Sludge/Soil Stabilization for Naval Air Station Jacksonville, Jacksonville, Florida*, dated February 1996. The concrete will be used as fill material in the areas of the Serpentine Pond that have previously been stabilized. Closure of the pond will occur as described in the *Application for: Closure Permit, Old Plating Shop (Bldg. 101), Domestic Sludge Drying Beds, Industrial Sludge Drying Beds, and Polishing Pond, April 1996, Naval Air Station Jacksonville, Jacksonville, Florida*.

## 1.1 SITE DESCRIPTION

Building 101, the Old Plating Shop, is located in the industrial area of NAS Jacksonville known as Operable Unit 3 and the Naval Aviation Depot (NADEP). Building 101 was the NADEP plating shop prior to closure. A construction project is underway to build a new building for the Repair Component Rework Facility in the area of the Old Plating Shop. The site currently consists of a slab on grade with former foundations and a mud slab in the area of the previous removal action. The area of concern is 173 ft by 202 ft. Demolition and construction drawings for the new area have been provided to Bechtel by the Navy.

## 1.2 REGULATORY SETTING

NAS Jacksonville was placed on the U.S. EPA National Priorities List (NPL) in December 1989. In October 1990, a Federal Facilities Agreement (FFA) was signed by the EPA, the Florida Department of Environmental Protection (FDEP), and the Navy to coordinate Installation Restoration Program (IRP) Activities at NAS Jacksonville. As part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), the Navy conducts the IRP Activities. As allowed under CERCLA, a time-critical removal action can be implemented, provided documentation acceptable to the regional administrator is provided for inclusion in the administrative record for the site. The removal action described in this RAWP is time-critical due to the need for the protection of the general construction worker at the site. Protection of the worker's health dictates the removal of potentially contaminated soils in the area of potential exposure, or within the footprint of the new building. This removal action will be consistent with the overall CERCLA Remedial Investigation/Feasibility Study (RI/FS) that is ongoing at Operable Unit (OU) 3. This RAWP is the first step in the documentation of the decision process for this removal action. The final documentation for this removal action will be contained in a Removal Action Memorandum that will be included in the Administrative Record file, available within 60 days of the start of the removal action. This memorandum will be provided as documentation to the administrative record for the removal action.

The Navy has discussed the approach presented in this RWP with the NAS Jacksonville partnering team and received concurrence from the regulatory participants to proceed as described herein.



## **2.0 REMOVAL ACTION**

The removal action discussed in this RAWP involves two parts for completion. The first part is the demolition of the concrete and removal of the contaminated soil from the area of the Old Plating Shop. The second part involves the final disposal of the concrete and the contaminated soil removed from the area of the Old Plating Shop. Bechtel has received notice to proceed on the first part of this action and intends to begin mobilization of equipment on Monday, June 17, 1996. The demolition of the concrete and excavation of the soil should begin by June 18, 1996. Based on this date, the Removal Action Memorandum must be placed into the established Administrative Record file available to the public by August 17, 1996.

### **2.1 CONCRETE AND SOIL REMOVAL**

Bechtel will mobilize labor, equipment, materials, and supplies to the area of the Old Plating Shop necessary to implement the actions described in this section of the work plan. The area will be secured from inadvertent intrusion by using signs and construction barrier fencing. A meeting with the Resident Officer in Charge of Construction (ROICC) and the general contractor will occur to coordinate column gridline locations noted on the construction drawings. The schedule for implementation will also be discussed. The Bechtel Site Superintendent will verify he has the current set of construction drawings and specifications for the follow on construction work. Drawings MCD1, MCD3, and MCD4 provide the general layout of the demolition activities, while Drawings MCS1, MCS3, MCS4, MCS5, MCS9, and MCS10 provide the information required for excavation.

It should be noted that in the area noted on the drawings as "SLAB THIS AREA PREVIOUSLY REMOVED", the concrete slab and underlying soils were removed during the Building 101, Old Plating Shop, RCRA Closure Actions. Refer to drawing MCD1 for the location of this area.

#### **2.1.1. Concrete Removal**

The concrete slab in the areas between column gridlines 38 and 44.9 and the additional area noted on MCD1 just south of column gridline 44.9 will be removed. The slab may be removed by either saw cut and sectional removal or by breaking through the use of power equipment. The deciding factor will be the ease in which the underlying soil can be removed from the concrete. Soil and concrete need to be maintained as separate piles and wastes. The concrete will be decontaminated using gross decontamination techniques to removed only the visible soil from the underneath side of the slab. The concrete will be loaded into trucks for transportation to PSC 42 storage area.

Other concrete that may be encountered during the excavation, such as footing, will be given gross decontamination on all sides and loaded for transport as described above.

#### **2.1.2 Contaminated Soil Excavation**

Soil in the area of the slab that was removed will be treated as contaminated soils. No testing is provided to confirm or deny this assumption. The soils in the area of the new slab-on-grade will

be excavated to a depth of 1 foot below the bottom of the new slab. The exception to this is the slab in the area of Column lines 43.8 and E.9. The soil in this area will be excavated to bottom elevation of the 2 ft slab. Drawing MCS4, MCS5, MCS9, and MCS10 provide the details for the depth of the excavation.

Soils in the areas of the footing indicated on Drawings MCS4 and MCS5 will be excavated to the bottom of footing elevation. Confirmation of footing elevation will be confirmed using field survey equipment. A common benchmark will be used to verify all bottom of footing elevations. If required by the Navy, a field as-built survey drawing can be provided after completion of all excavation activities. Over excavation of 1 to 4 inches will not require rework, but under excavation will require additional excavation.

### **2.1.3 Contaminated Materials Transportation**

Transportation of contaminated materials will be performed following the general guidance of the Bechtel Navy RAC *Technical Specification for Transportation of Contaminated Materials*, 001-SP000-003. This specification was written for Bechtel to use in Subcontracting actions, but can be used to provide general guidance to the field personnel regarding the loading and transporting of materials to avoid the spreading of contamination. A copy of this specification is available to the Site Superintendent at the NAS Jacksonville Bechtel trailer.

The concrete will be loaded separately from the contaminated soils. The number and approximate yardage of materials loaded onto trucks will be recorded on the Bechtel Navy RAC Program Waste Management Plan waste tracking log, which will become part of the final Removal Action Memorandum.

A haul route will be agreed upon with the ROICC. Once established, this route will be inspected daily by Bechtel personnel to ensure that no contaminated soils are being spread along the route. No trucks hauling the materials to PSC 42 will leave the confines of the NAS Jacksonville base.

The trucks will transport the concrete and contaminated soil to a staging area located at PSC 42. This temporary staging area is only until authorization of implementation for Part 2 is given. This staging area will not be used for more than 90 days.

### **2.1.4 Contaminated Materials Stockpile**

Two stockpile areas will be created at PSC 42. One will be for concrete and the other for the contaminated soils. Both will be bermed and lined areas to capture any inadvertent rainwater or minor leachate that could occur at the stockpile. Each stockpile will be covered with poly liner to prevent any stormwater run-on or intrusion, thereby eliminating the potential of generating leachate. Materials suitable for covering and holding down the cover will be used. Daily inspection of the stockpile areas will occur until they are removed. Repairs will be implemented when necessary.

### **2.1.5 Foundation Compaction and Testing**

The area of the new slab-on-grade and the new foundations shown on Drawing MCS3, MCS4, and MCS5 will be compacted to the density specified by the Navy or the Design Drawings and Specifications.. Compaction tests will be performed by a Bechtel Subcontractor at the frequency specified by the Navy or the Design Drawings and Specifications. Compaction reports will be forwarded to the ROICC upon receipt for approval prior to final demobilization from the site.

### **2.1.6 Building Foundation and Slab Liner/Cover**

After acceptance by the Navy of the extent of excavation and the compacting of the subgrade below the foundations, Bechtel will place a 10-mil poly liner over the area of potentially contaminated soils. This liner will be held in place using sand bags, spikes, or by other means as agreed upon by the Navy, Bechtel, and the general construction contractor. After Bechtel demobilizes from the site, it is the responsibility of the Navy and the general construction contractor to maintain the cover in good condition to be protective of the general construction workers.

At the Navy's option and additional costs, a 2 inch mud slab could be placed. This would however require additional excavation resulting in additional costs.

### **2.1.7 Decontamination of Equipment**

A decontamination area will be established in the area to decontaminate equipment and personnel. The water from the decontamination activities will be tested for the criteria specified in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. If passing criteria is achieved, the decontamination water will be discharged directly to the federally owned treatment works (FOTW), if not it will be processed through the treatment unit at PSC 42 prior to discharge to the FOTW.

## **2.2 CONCRETE AND CONTAMINATED SOIL FINAL DISPOSAL**

The final disposal of the materials removed from the Old Plating Shop area under this removal action will be performed under Part 2 of this deliver order. Current funding limitations have prevented Bechtel from securing funding for actions described in this section of the RAWP. The funding of the treatment and disposition of the materials staged at PSC 42 will be completed within 90 days, or the staged materials will be containerized, labeled, and secured in accordance with the Bechtel Navy RAC Waste Management Plan. The discussion herein is created around the option of incorporation of the materials into the PSC 42 stabilization process, prior to the time mentioned above elapses. At the time of this writing, it was understood that the NAS Jacksonville partnering team members had agreed to this concept. If an alternative method of treatment and/or disposal is need, additional funding will be secured and a revision to this RAWP will be issued.

### **2.2.1 Concrete Disposal**

The concrete will be disposed in the Serpentine pond by placing it in cells that have previously been stabilized. Prior to placement, the concrete will be pressure washed to remove loose soils. The wash water will be collected in a portion of the Serpentine pond that has not yet been stabilized. The concrete will then be placed to minimize void space and potential soil settlement problems. The clayey fill materials already staged at the PSC 42 site will then be used to cover the concrete. Final closure of the Serpentine pond is as addressed in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*.

### **2.2.2 Contaminated Soil Disposal**

The contaminated soils will be combined with the Serpentine Pond sludge and soils prior to the stabilization process addressed in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. A portion of the Building 101 soils will be placed in a cell at the Serpentine pond prior to stabilization, but after dewatering. The amount of soil placed in the cell will be such that it does not cover more than 1 ft of the sludge and soils already present in the cell. The mixing process and stabilization process will be as provided in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. The stabilization and subsequent testing will demonstrate that the Building 101 soils will meet the criteria specified in 40 CFR 268 for disposal, and therefore comply with the insitu stabilization work that this ongoing at PSC 42.

## **2.3 DECONTAMINATION WATER DISPOSAL AND HANDLING**

Decontamination water will be contained in 1,500-gal poly tanks. Sampling will be as described in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. If the criteria for direct discharge to the FOTW is met, the water will be discharged to the FOTW. Otherwise, the water will be treated by the mobile treatment plant staged by Bechtel for the in-situ stabilization work at PSC 42. Quantities of the water treated will be recorded and the Bechtel Navy RAC Waste Management Plan tracking logs will be kept of the amount of water discharged to the FOTW as a result of the actions described in this RAWP.

## **2.4 REMOVAL ACTION MEMORANDUM**

An Action Memorandum will be included into the administrative record by August 17, 1996. Bechtel will complete this memorandum and submit it to the Navy by August 5, 1996. This memorandum will summarize the activities and decision process for the actions described in this RAWP.

## **3.0 WASTE MANAGEMENT**

Waste management activities will be as specified in *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. Logs will be kept on all concrete, soil, and

water quantities generated during this removal action. In addition the PSC 42 as-built drawings will indicate where these materials were deposited.

#### **4.0 QUALITY ASSURANCE PLAN**

Quality assurance will be as specified in *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*. In addition the compaction testing as required by the Design Drawings for the new structure at the Old Plating Shop will be followed. Reports will be submitted to the ROICC for approval prior to covering any of the areas.

#### **5.0 SAMPLING AND ANALYSIS PLAN**

No sampling is proposed for the limits of excavation. No sampling is proposed of the concrete and potential contaminated soils. Post treatment sampling will be as specified in the *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization*.

#### **6.0 SAFETY AND HEALTH PLAN**

The task specific safety and health plan for PSC 42 will be followed for this work, with a revision being issued to account for the demolition, loading, and hauling activities. Contaminant exposure is the same, with the exception to thallium. Maximum concentrations of thallium reported in the PEER range from 4.8 to 5.5 ppm.

#### **7.0 PROJECT MANAGEMENT PLAN**

##### **7.1 PROJECT ORGANIZATION**

As the Environmental RAC for the Navy, Bechtel provides NAS Jacksonville management of remedial action field activities, which includes all activities necessary to implement field work delineated in work plans. Typically, these activities include development and procurement of subcontract services; development, implementation, and overview of plans; collection and review of data, including sampling results, quality assurance/quality control submittals, and sample tracking and custody; technical guidance to onsite personnel; report preparation; cost management; and schedule control. Key leadership for the project is provided by the project manager, Hermann Bauer; the construction manager, Eddie Najmola; the construction superintendent, Bill Norton; safety and health representative, Tom Rountree; and quality assurance manager, Jerry Grissett.

##### **7.2 SCHEDULE**

The schedule for the implementation of the actions described in this RAWP is not finalized. When the schedule has been finalized, a copy will be forwarded to the Navy.

## REFERENCES

- ABB Environmental Services, Inc. (ABB) 1995. *Preliminary Economic Evaluation Report (PEER) for Soil Contamination Reduction, Old Plating Shop, Building 101, Naval Air Station, Jacksonville, Florida.* March 1995
- ABB 1996. *Application for Closure Permit Old Plating Shop (Bldg. 101), Domestic Sludge Drying Beds, Industrial Sludge Drying Beds, and Polishing Pond, April 1996, Naval Air Station Jacksonville, Jacksonville, Florida.* April 1996
- Bechtel Environmental Inc. 1996. *Interim Remediation Work Plan, Serpentine Pond (PSC 42), In-Situ Sludge/Soil Stabilization.* February 1996.